

REMARKS

In the Office Action, claims 1-7 and 23-40 were withdrawn from consideration. The Declaration received on November 25, 2004 was accepted. Claims 12 and 13 were rejected under 35 U.S.C. §112, second paragraph, as being incomplete. Claim 21 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 11-22 were rejected under 35 U.S.C. §103(a) as being unpatentable over United States Patent 5,392,299 to Rhines, et al. (Rhines). In this Amendment, Applicants have amended claims 12-13 and 21-22, and withdrawn claims 1-7 and 23-40. Applicants have not added any claim. Accordingly, claims 11-22 will be pending in the application upon entry of this Amendment.

I. Election of Claims 11-22

In the Office Action, claims 1-7 and 23-40 were withdrawn from consideration under the restriction requirement dated March 30, 2005. Applicants respectfully submit that the current restriction requirement is undue in light of the arguments previously submitted and particularly in light of the prior restriction requirement dated September 07, 2004. However, in this Amendment, Applicants elect claims 11-22 with traverse, and withdraw the unelected claims.

II. Declaration

The Declaration received on November 25, 2004 was accepted by the Examiner. Applicants thank the Examiner for resolution of this issue.

III. Rejection of Claims 12 and 13 under §112

Claims 12 and 13 were rejected under §112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements. Specifically, the Examiner requested clarification of the embodiments described in these claims. Claims 12 and 13 are dependent on claim 11. Claim 11 recites a second set of encoded data is generated and iteratively updated according to the information bits in the row. Claim 12 recites the second set of encoded data is encoded according to the first encoding scheme, while claim 13 recites the second set of encoded data is encoded according to the second encoding scheme. Neither claim 12 nor claim 13 are dependent on the other. Applicants respectfully

submit that the second set of encoded data is encoded according to a first or a second encoding scheme in alternate embodiments. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §112 rejection of claims 12 and 13.

IV. Rejection of Claim 21 under §112

Claim 21 was rejected under §112, second paragraph, as being indefinite. Specifically the Examiner requested definition of the term “predetermined number of bits” and explanation of the term “rotating the hyper parity array by a predetermined number of bits.” Claim 21 is dependent on claim 20, which is dependent on claim 11. Applicants have amended claim 21 to recite the method of claim 20, where the step of hyper-diagonally encoding further includes updating the hyper parity array by iteratively encoding the parity array for the information bits and the first set and the second set of encoded data for each row; and rotating the hyper parity array. Rotating the hyper parity array includes re-locating several of the parity array bits in the array. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §112 rejection of claim 21.

V. Rejection of Claims 11-22 under §103(a)

Claims 11-22 were rejected under §103(a) as being unpatentable over Rhines. Claims 12-22 are dependent on claim 11. Claim 11 recites a method that encodes a block of data. The block of data has n -dimensions and is received from an input source. The block contains several information bits. The method receives a row of the block and immediately outputs the row. The method encodes the information bits in the row. A first set of encoded data is generated according to a first encoding scheme. The method outputs the first set of encoded data. The method encodes the information bits in a column according to a second encoding scheme. A second set of encoded data is generated and iteratively updated according to the information bits in the row. The method hyper-diagonally encodes the information bits in the block according to a parity encoding scheme. A hyper set of encoded data is generated according to the information bits in the row and column and the first and second sets of encoded data. The method outputs the second set of encoded data after all the information bits and all subsequent first sets of encoded data are outputted. The method outputs the hyper set of encoded data.

Applicants respectfully submit that Rhines does not disclose, teach, or even suggest such a method. To support the rejection, the Examiner refers to a discussion of Rhines from a prior non-final office action. In the non-final office action dated September 07, 2004, the Examiner cites Figures 2, 3, 4A-4B, 5, 8, column 4, lines 59-62, column 10, lines 31-68, and column 25, lines 34-42, of Rhines. The Examiner then states: "However, Rhines does not explicitly teach the specific use of hyper set of encoded data generated based on second sets of encoded data, that is, an arrangement whereby the first encoder in a set of serially concatenated encoders is a row encoder, the second encoder is a column encoder and the third is a hyper encoder." Applicants respectfully submit that the cited portions do not disclose, teach, or even suggest this and several other limitations recited in claim 11. For instance, Rhines does not disclose, teach, or even suggest that the hyper set of encoded data is generated according to the information bits in the (1) row and (2) column and the (3) first and (4) second sets of encoded data, as recited in claim 11. To disclose this limitation, the Examiner cites Rhines at column 25, lines 34-42, which states, in sum, "it will be understood that the invention is not limited to the embodiments disclosed ..." However, Applicants respectfully submit that this naked statement is insufficient to support the rejection under §103(a). Thus, Applicants respectfully submit that the cited portions do not disclose, teach, or even suggest several limitations recited in claim 11.

Accordingly, Applicants respectfully submit that Rhines does not render unpatentable claim 11. Since claims 12-22 are dependent on claim 11, Applicants respectfully submit that Rhines does not invalidate claims 12-22 for at least the reasons discussed above in relation to claim 11. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §103(a) rejection of claims 11-22.

CONCLUSION

Applicants respectfully submit that all pending claims, namely claims 11-22, are in condition for allowance. Reconsideration of the objections and rejections is requested. Examination and allowance are earnestly solicited at the earliest possible date. Should the Examiner have any questions or comments, the Examiner is encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: 8-1-05

By: 

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CERTIFICATE OF MAILING (37 CFR § 1.8(a))

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